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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/741,917	12/20/2000	Ronaldus Maria Aarts	PHN 17,834	9594

24737 7590 09/25/2003

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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BRIARCLIFF MANOR, NY 10510

EXAMINER

HARPER, V PAUL

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 09/25/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/741,917

Applicant(s)

AARTS ET AL.

Examiner

V. Paul Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6, 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The Examiner has considered the references listed in the Information Disclosure Statements dated 12/20/00 and 1/22/02. Copies of these Information Disclosure Statements are attached to this office action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Masaharu et al. (Japanese Patent Application Publication JP 09114479A), hereinafter referred to as Masaharu.

Regarding claim 1, Masaharu discloses a sound field reproducing device with the following features: **“signal supply means for supplying speech and music signals over one or several (n) different input channels “** (English abstract, ¶0011 voice and nonvoice signal acquisition); **“separation means for substantially separating the speech and music signals”** (English abstract, ¶0015 voice signal is extracted from inputted stereo); **“first converter means for converting the music signals in accordance with a desired virtual spatial widening from which the music signals**

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can be heard through one or several (m) different output channels,” (English abstract, reflection sounds are added to the outputted signals, and ¶0014, sound field expansion); **“combination means for combining the speech signals with the converted music signals”** (English abstract, adding circuit 14, and ¶0013, addition means mentioned in last sentence).

Regarding claim 4, Masaharu teaches everything claimed, as applied above (see claim 1). In addition, Masaharu discloses **“sound reproduction means for the individual output channels for reproducing amplified speech and music signals”** (English abstract, ¶0015, last sentence in particular where it states that the output signal is emitted as sound by two or more speakers with necessary output channels).

Regarding claim 5, Masaharu teaches everything claimed, as applied above (see claim 1). In addition, Masaharu discloses **“with a unit in which a picture screen and sound reproduction means are incorporated”** (¶0002, sound system and big screen combined).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masaharu in view of Hiroshi (Japanese Patent Application Publication JP 09084198).

Regarding claim 2, Masaharu teaches everything claimed, as applied above (see claim 1). In addition, Masaharu discloses a field expansion means that can make arbitrary positions of space able to orientate an image using sound effects (§0014), but Masaharu does not specifically teach **“that signal direction detection means are present for ascertaining the direction from which the speech signals originate, and second converter means for converting the speech signals in accordance with a desired virtual change in the direction from which the speech signals can be heard, the converted speech signals and the converted music signals being joined together in the combination means.”** However, the examiner contends that this concept was well known in the art, as taught by Hiroshi.

In the same field of endeavor, Hiroshi discloses a sound signal processor and surround reproducing method where the original input correspondence is known and is used to determine direction (§'s 0002, 0003, English abstract)

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Masaharu by specifically providing signal direction means, as taught by Hiroshi, to generate a corresponding depth of sound corresponding to the original (§0002).

Regarding claim 3, Masaharu teaches everything claimed, as applied above (see claim 2). But Masaharu in view of Hiroshi does not specifically teach **“the second converter means are provided with one or several additional input channels**

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through which speech and position signals can be supplied from a microphone having position recording means.” However, the examiner contends that this concept was well known in the art, as taught by Hiroshi.

Hiroshi further discloses a sound signal processor and surround reproducing method where the position of the vocal components is known (¶'s 0004, English abstract)

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Masaharu by specifically providing signal direction means, as taught by Hiroshi, to generate a corresponding depth of sound and vocal positioning (¶0002).

Citation of Pertinent Art

4. The following prior art made of record but not relied upon is considered pertinent to the applicant's disclosure:

- Cowieson (U.S. Patent 6,198,826) discloses an invention that outputs multiple signals from a two-channel stereo input signal.
- Kirkeby (U.S. Patent Application Publication 2002/0097880) discloses a method for giving a listener the impression that a stereo source is emanating from a virtual source.

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Conclusion

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks
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(703) 872-9314

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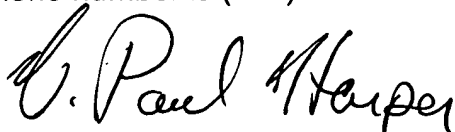
Crystal Park II
2121 Crystal Drive
Arlington, VA.
Sixth Floor (Receptionist)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. V. Paul Harper whose telephone number is (703) 305-4197. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (703) 305-9645. The fax phone number for the Technology Center 2600 is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service office whose telephone number is (703) 306-0377.

VPH/vph
September 10, 2003



VIJAY CHAWAN
PRIMARY EXAMINER